

Learn

# PowerBi

MAGIC<sup>✦✦</sup>



**IN 30 DAYS**

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# DAY 1

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## Introduction to Power BI

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### Resources for Learning

- Microsoft Learn: [Introduction to Power BI](#)
- YouTube Tutorial: [Getting Started with Power BI](#)

### Practice Questions

- Download and install Power BI Desktop on your computer.
- Create a new Power BI report.
- Import a simple Excel dataset (e.g., sales data) into Power BI.

### Project for the Day

- Create a basic sales report using the imported Excel dataset.
- Add a bar chart to visualize total sales by product category.
- Format the visuals and explore the options in Power BI Desktop.



## DAY 2

# Data Transformation and Cleaning

Raw Data				Transform Data				
id	title	publ_year	edition_count	id	title	publ_year	edition_count	rating
E1	CrowdDB	11	10	E1	CrowdDB	2011	100	2
E2	ToyDB	2005	1500	E2	ToyDB	2005	1500	1
E3	Wider	Feb. 2012	200	E3	Wider	2012	200	3
E4			100	E4			100	1
E5			107	E5	Database	2008	107	1
E6	CrowdDB	2012	1	E6	CrowdDB	2012	10	1
E7	Online Apps	1997	687	E7	Online Apps	1997	687	0
Trained	Wider - KDB	2012	200					

## 📁 Resources for Learning

- Microsoft Learn: [Transform data with Power Query](#)
- YouTube Tutorial: [Data Transformation in Power BI](#)



## Practice Questions

- Load a CSV dataset (e.g., customer data) into Power BI.
  - Use Power Query to filter and clean the data (remove duplicates, null values, etc.).
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## Project for the Day

- Import a CSV dataset with customer information.
- Clean the data using Power Query by removing duplicates and null values.
- Create a new column to calculate the age of customers based on their birthdates.



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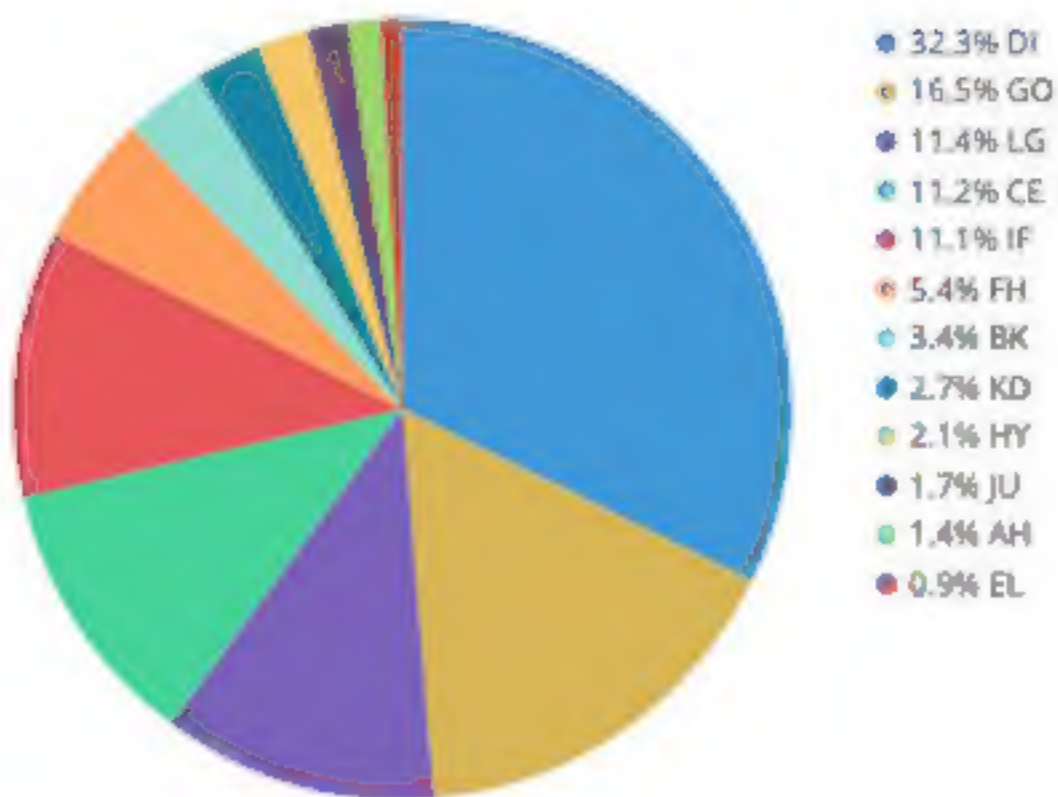
## DAY 3

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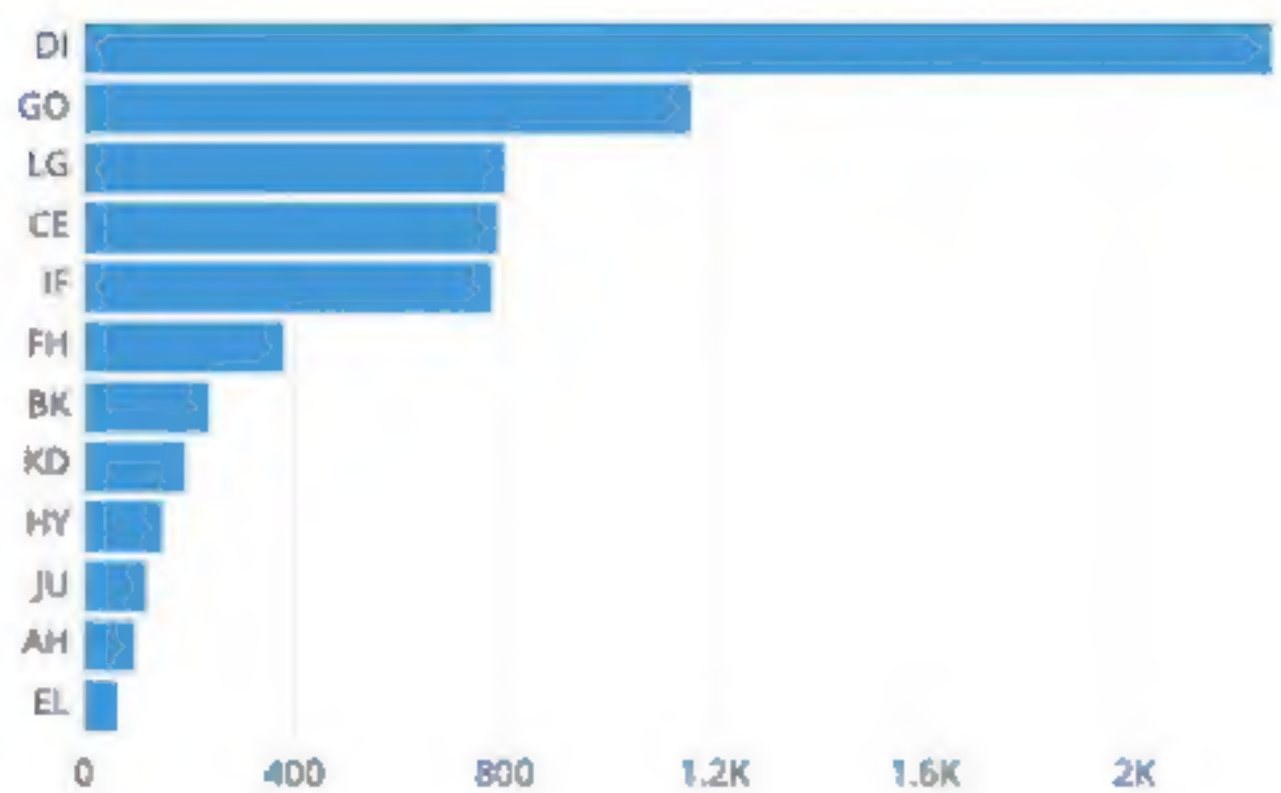
# Basic Data Visualization

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Production by district



Production by district



## Resources for Learning

- Microsoft Learn: [Create your first Power BI report](#)
- YouTube Tutorial: [Basic Data Visualization in Power BI](#)

## Practice Questions

- Create a column chart to display product-wise sales.
- Add a pie chart to visualize the distribution of sales by region.





## Project for the Day

- Use the cleaned customer dataset from Day 2.
- Create a column chart to display the distribution of customers by age groups.
- Add a pie chart to show the distribution of customers by gender.





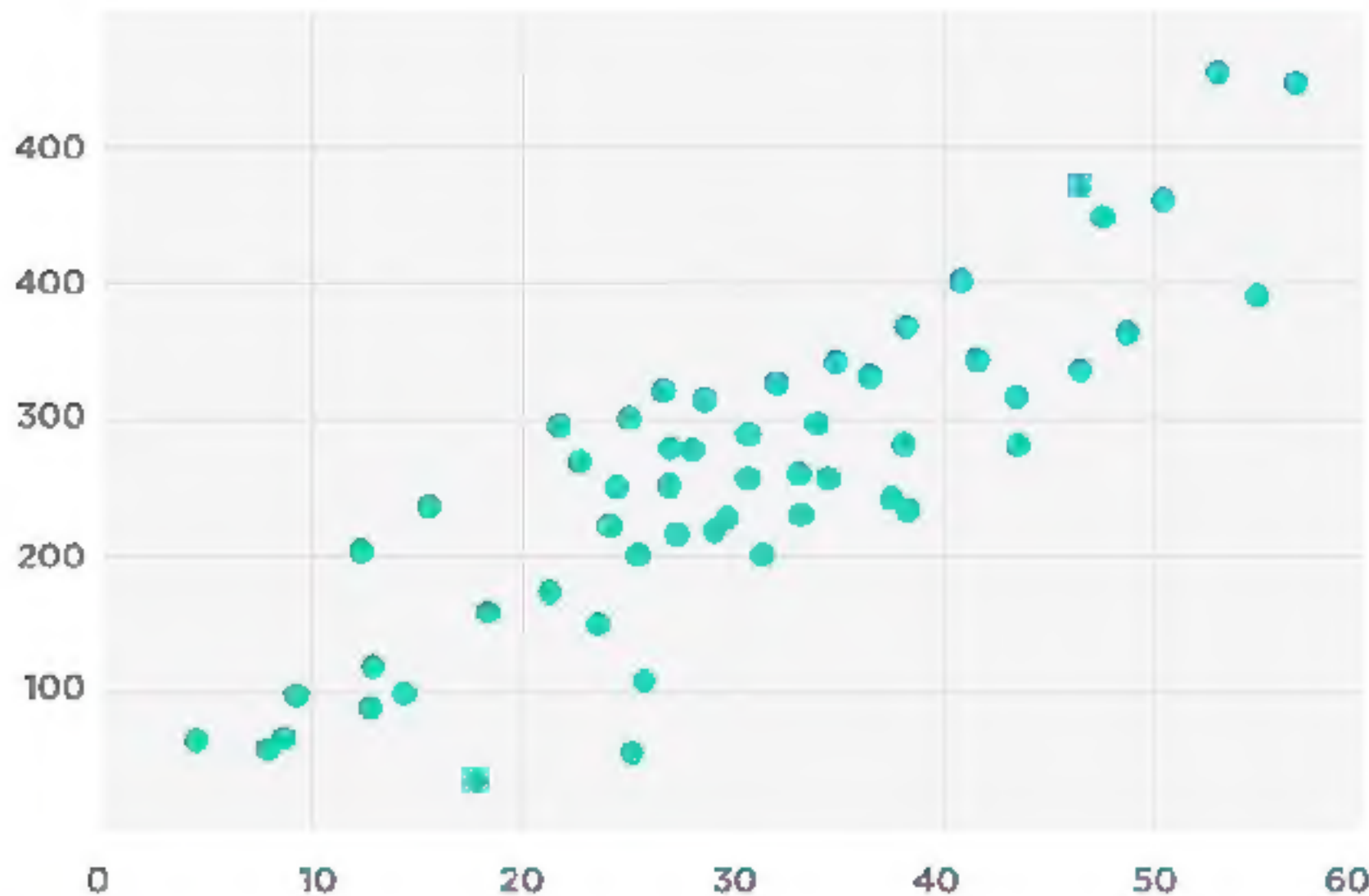
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## DAY 4

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# Exploratory Data Analysis

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## Resources for Learning

- Microsoft Learn: [Explore your data with Power BI](#)
- YouTube Tutorial: [Exploratory Data Analysis in Power BI](#)

## Practice Questions

- Create a scatter plot to visualize the relationship between price and sales.
- Build a line chart to show the trend of monthly sales over time.





## Project for the Day

- Use the sales data from Day 1 or Day 3.
- Create a scatter plot to explore the relationship between price and sales volume.
- Build a line chart to visualize the monthly sales trends over the past year.



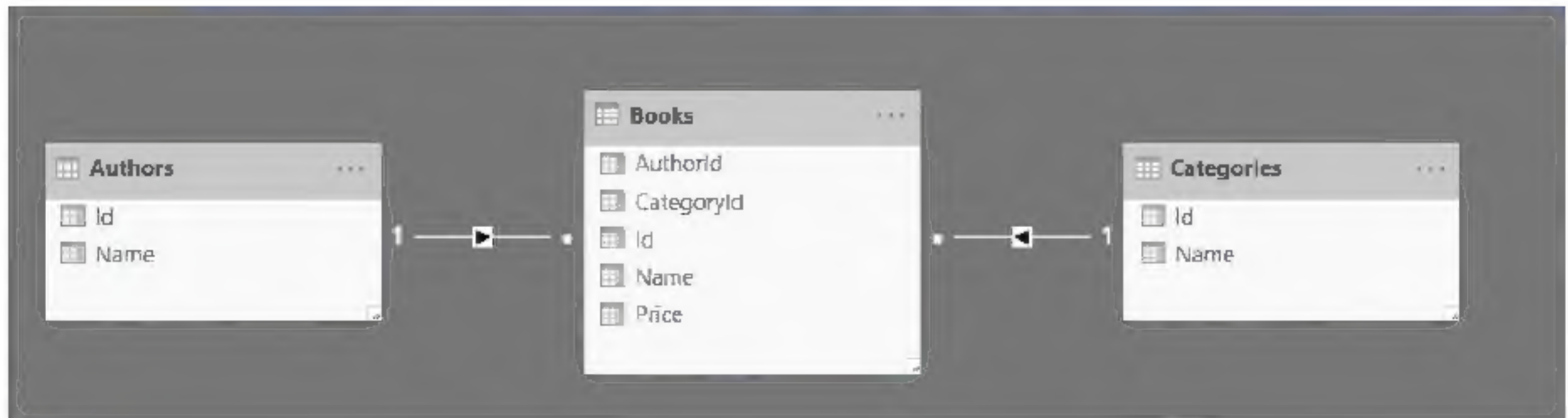


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## DAY 5

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# Data Modeling & Relationships



## Resources for Learning

- Microsoft Learn: [Create relationships in Power BI Desktop](#)
- YouTube Tutorial: [Data Modeling and Relationships in Power BI](#)

## Practice Questions

- Import a new dataset (e.g., orders data) and create relationships with existing tables.
- Use RELATED and RELATEDTABLE functions in DAX to retrieve related data.





## Project for the Day

- Import an orders dataset with information about customer orders.
- Create a relationship between the sales and orders tables based on a common field (e.g., customer ID).
- Build a report that combines sales and orders data, and visualize customer-related insights.



# DAY 6

## Advanced Data Visualization

Region	Central		East		West		Total	
Sales Stage	Opportunity Count	Revenue	Opportunity Count	Revenue	Opportunity Count	Revenue	Opportunity Count	Revenue
Lead								
Small	26	\$22,907,676	38	\$47,428,906	11	\$11,889,018	75	\$82,225,600
Medium	25	\$96,249,147	30	\$116,539,256	18	\$72,871,687	73	\$285,660,100
Large	40	\$321,876,492	33	\$255,568,275	18	\$149,636,713	91	\$727,081,480
Total	91	\$441,033,315	101	\$419,536,437	47	\$234,397,428	239	\$1,094,967,180
Quality								
Small	10	\$11,550,016	19	\$23,925,214	5	\$5,695,989	34	\$41,171,219
Medium	12	\$48,820,525	19	\$71,617,016	8	\$33,018,968	39	\$153,456,509
Large	7	\$51,344,920	12	\$100,149,924	2	\$13,727,406	21	\$165,222,250
Total	29	\$111,715,461	50	\$195,692,154	15	\$52,442,363	94	\$359,849,978
Solution								
Small	13	\$13,771,741	8	\$10,283,935	7	\$7,155,493	28	\$31,211,169
Medium	9	\$38,048,946	13	\$54,729,272	4	\$16,363,417	26	\$109,141,635
Large	7	\$48,923,102	9	\$69,333,963	4	\$29,922,591	20	\$148,179,656
Total	29	\$100,743,789	30	\$134,347,170	15	\$53,441,501	74	\$288,532,460
Proposal								
Small	8	\$13,095,186	3	\$4,770,862	3	\$3,720,287	14	\$21,586,335
Medium	4	\$15,283,161	6	\$25,607,581	5	\$21,456,937	15	\$62,347,679
Large	2	\$18,344,522	4	\$29,592,481	2	\$17,855,445	8	\$65,792,448
Total	14	\$46,722,869	13	\$59,970,924	10	\$43,032,669	37	\$149,726,462
Finalize								
Small	1	\$1,788,307	1	\$1,693,585			2	\$3,481,892
Medium	2	\$8,974,009			2	\$7,926,517	4	\$16,900,526
Large	2	\$12,539,930	4	\$29,002,843	2	\$13,249,668	8	\$54,792,441
Total	5	\$23,302,246	5	\$30,696,428	4	\$21,176,185	14	\$75,174,859
Total	168	\$723,517,680	199	\$840,243,113	91	\$404,490,146	458	\$1,968,250,939



### Resources for Learning

- Microsoft Learn: [Enhance your report with Power BI visuals](#)
- YouTube Tutorial: [Advanced Data Visualization in Power BI](#)







## Practice Questions

- Use a matrix visualization to show cross-tabulated data.
- Create a card visualization to display the total sales for a specific category.



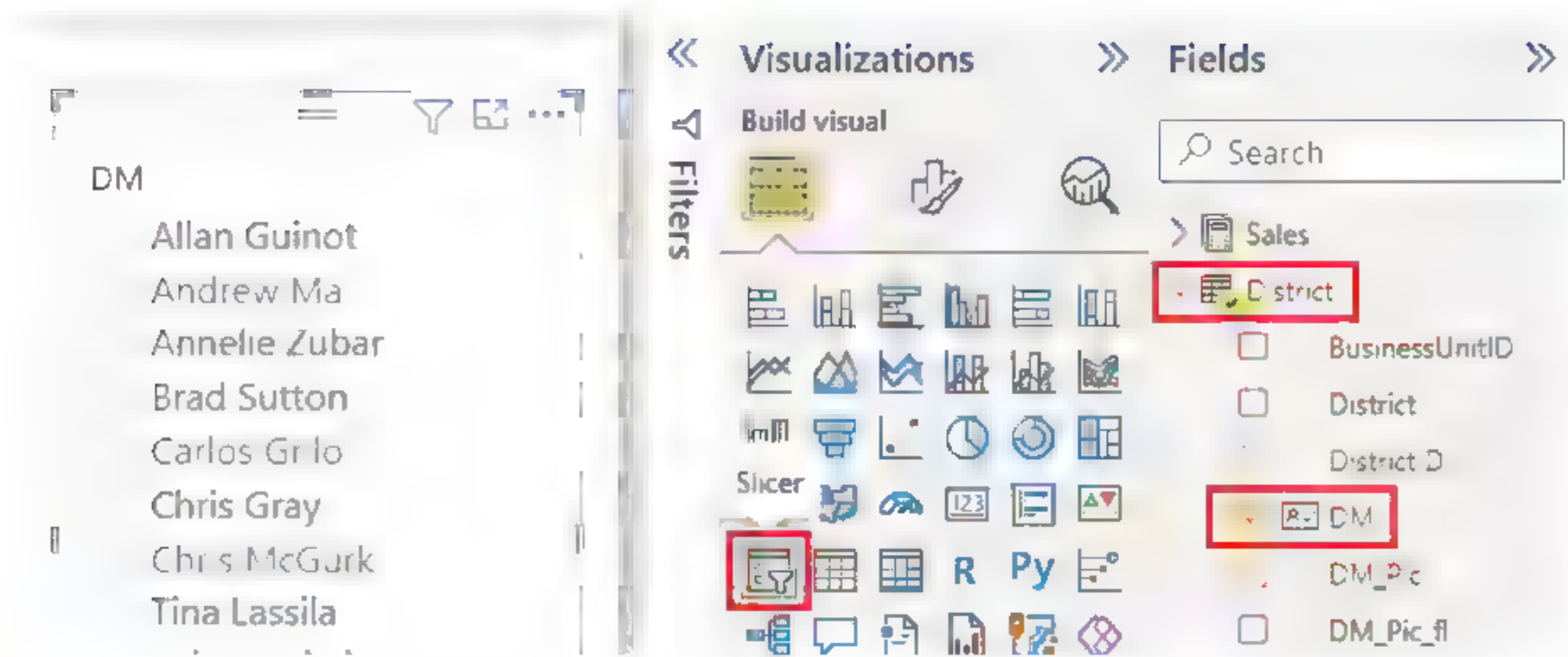
## Project for the Day

- Use the combined sales and orders data from Day 5.
- Create a matrix visualization to display the relationship between customers and their orders.
- Add a card visualization to show the total revenue for a specific customer.



# DAY 7

## Data Insights & Storytelling



### Resources for Learning

- Microsoft Learn: [Create a data-driven story with Power BI](#)
- YouTube Tutorial: [Data Storytelling in Power BI](#)

### Practice Questions

- Create a slicer to filter data and highlight insights.
- Use bookmarks to create interactive presentations.



## Project for the Day

- Use the sales and orders dataset from Day 5.
- Create a slicer to allow users to filter data by specific time periods.
- Build a series of visuals to showcase the impact of promotions on sales over time.
- Use bookmarks to create an interactive presentation that tells a data-driven story.



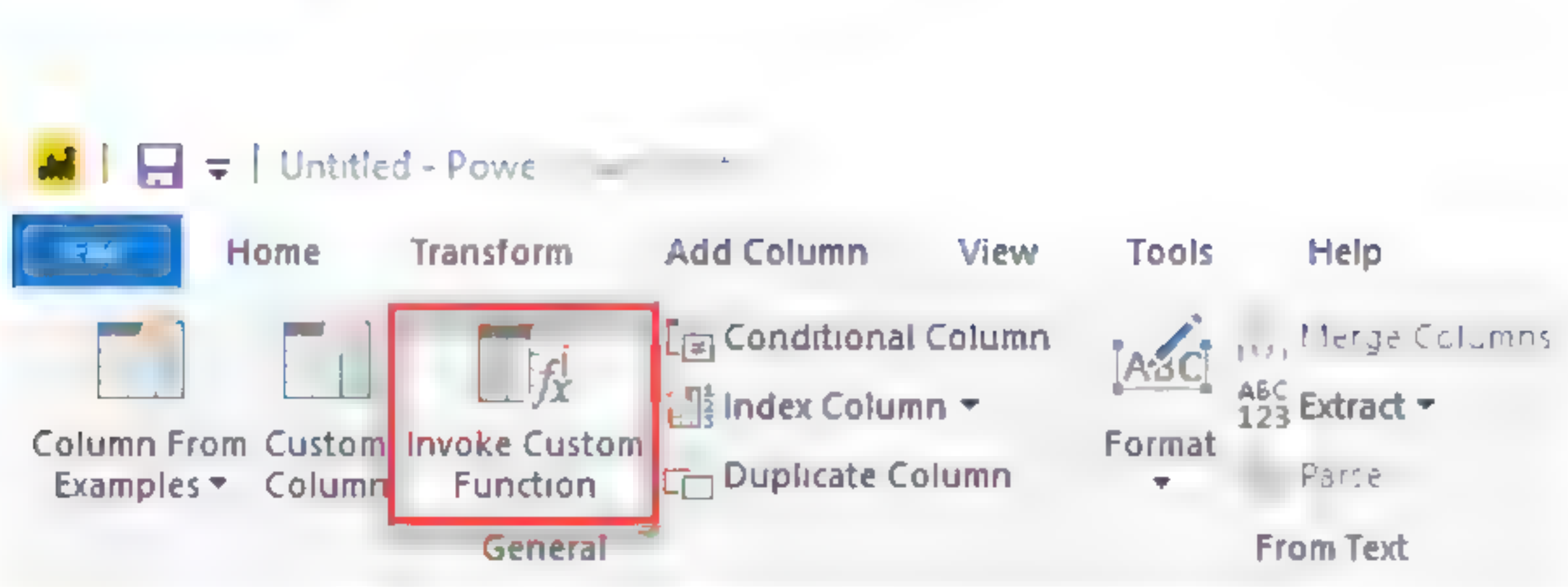


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## DAY 8

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# Introduction to Power Query Functions



## Resources for Learning

- Microsoft Learn: [Get started with Power Query functions](#)
- YouTube Tutorial: [Introduction to Power Query Functions](#)

## Practice Questions

- Create a custom column using a simple Power Query function.
- Use a built-in Power Query function to transform text data.



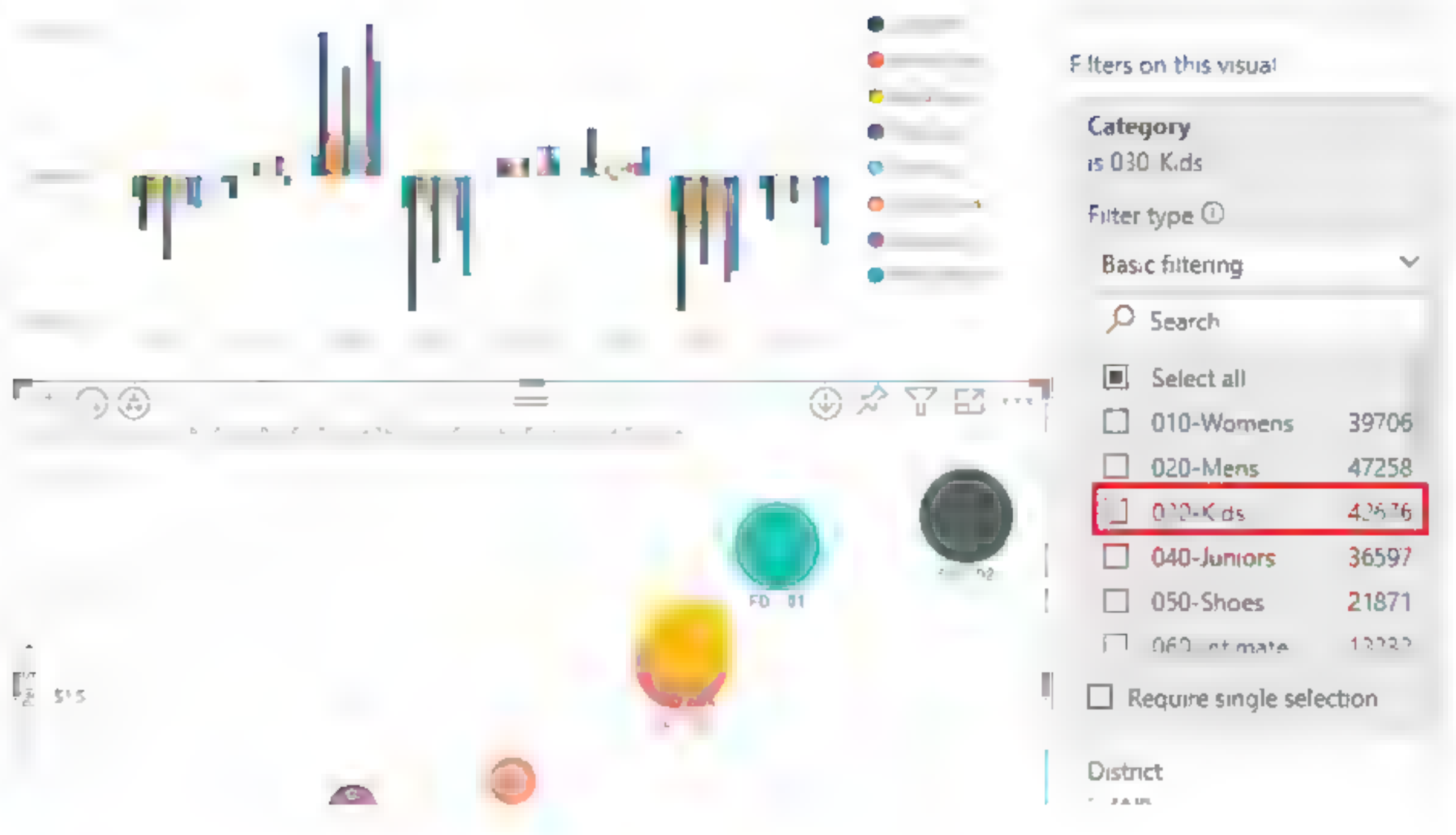
## Project for the Day

- Use the sales dataset from Day 1 or Day 3.
- Create a custom column that calculates the total revenue for each product based on price and quantity sold.
- Use the UPPER function to transform the product names to uppercase.



## DAY 9

# Power Query Parameters & Advanced Transformations



## Resources for Learning

- Microsoft Learn: [Use parameters in Power BI Desktop](#)
- YouTube Tutorial: [Power Query Parameters and Advanced Transformations](#)







## Practice Questions

- Use a parameter to filter data based on a specific product category.
- Create a parameterized query to load data dynamically.



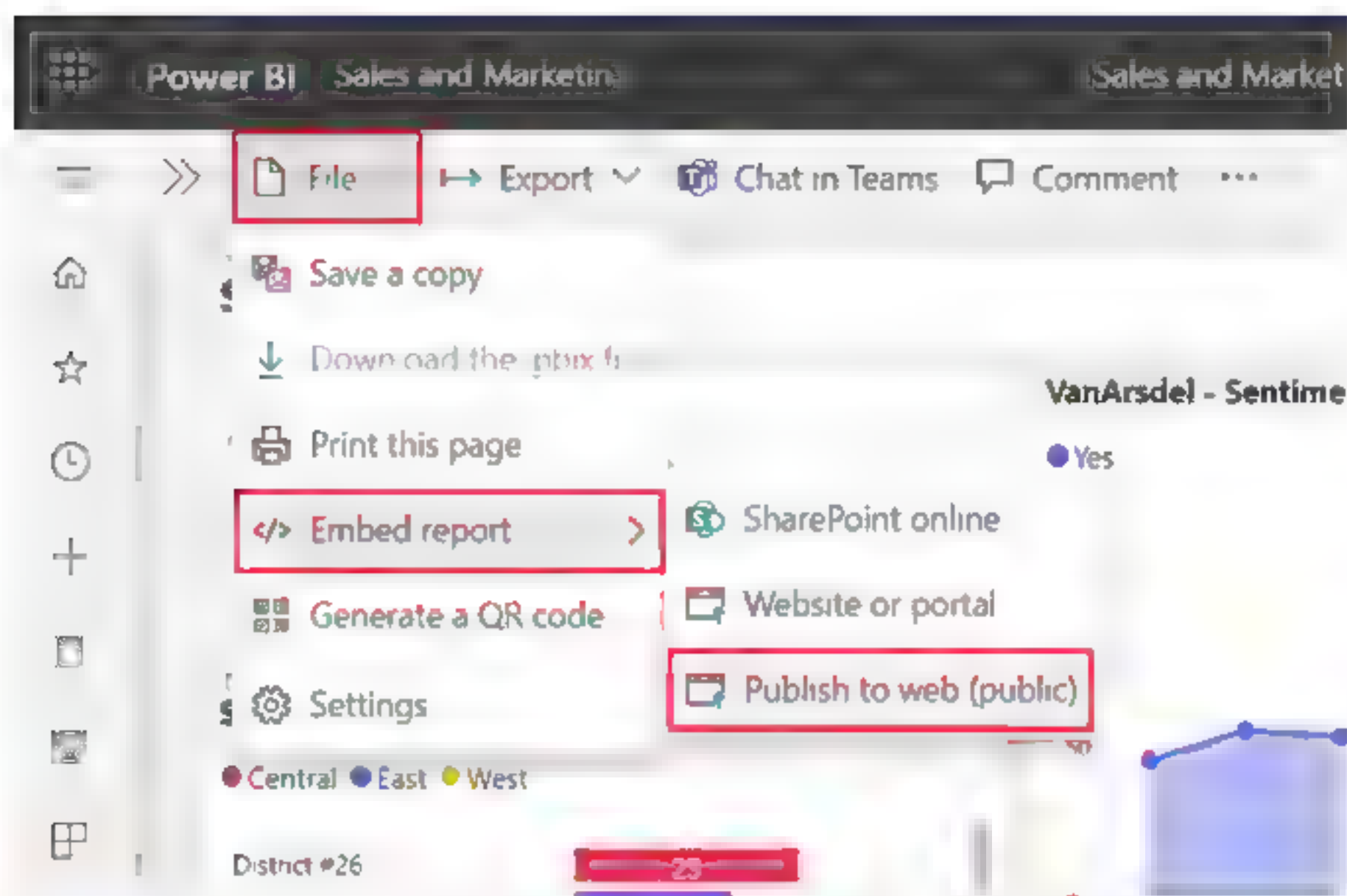
## Project for the Day

- Import a new dataset containing product categories and subcategories.
- Use a parameter to allow users to select a specific category and filter the data accordingly.
- Create a parameterized query to load sales data based on user input for a particular year.



## DAY 10

# Publishing and Sharing Power BI Reports



## Resources for Learning

- Microsoft Learn: [Publish a Power BI Desktop file](#)
- YouTube Tutorial: [Publishing and Sharing Power BI Reports](#)





## Practice Questions

- Publish a report to the Power BI service.
- Share a report with a colleague and assign them specific access permissions.



## Project for the Day

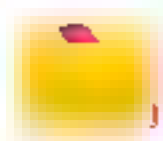
- Use any of the completed reports from the previous days.
- Publish your report to the Power BI service.
- Share the published report with a colleague and grant them view access.
- Explore the sharing options, including embedding and sharing links.





## DAY 11

# Understanding Power BI's Mobile Reports



## Resources for Learning

- Microsoft Learn: [Create reports optimized for mobile devices](#)
- Power BI Blog: [Power BI Mobile App Features](#)





## Practice Questions

- Design a report layout optimized for mobile devices, considering responsive design principles.
- Test the report layout using Power BI's mobile app.



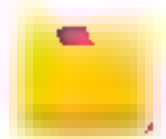
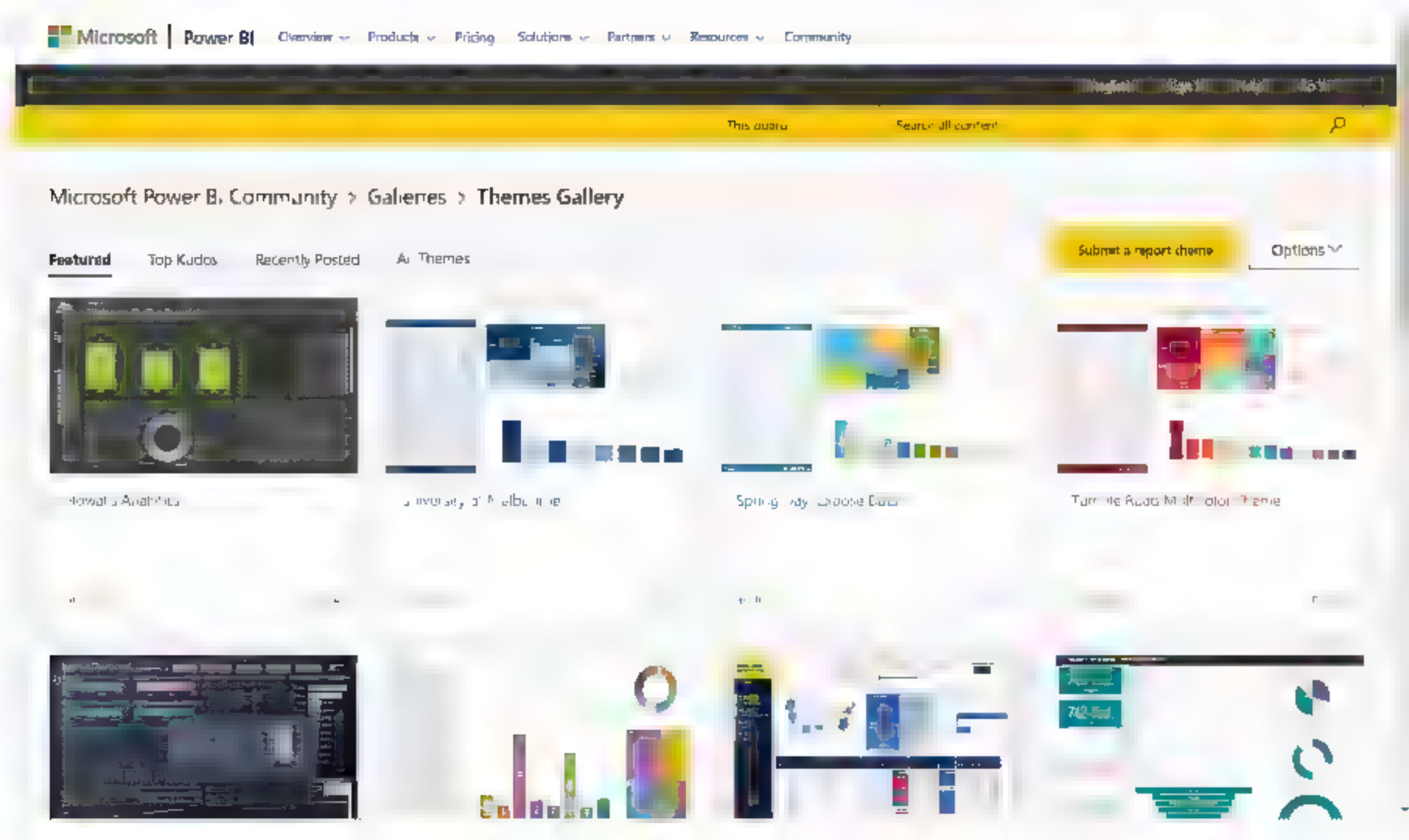
## Project for the Day

- Use the sales and orders dataset from Day 5.
- Create a mobile-optimized version of your dashboard, focusing on key insights and visualizations.
- Test the mobile layout on your smartphone to ensure it's responsive and user-friendly.



## DAY 12

# Exploring Power BI's Report Themes



## Resources for Learning

- Microsoft Learn: [Customize the look of a report with themes](#)
- Power BI Community Blog: [Creating and Using Custom Themes](#)





## Practice Questions

- Apply a custom theme to your dashboard and adjust colors, fonts, and other styling elements.



## Project for the Day

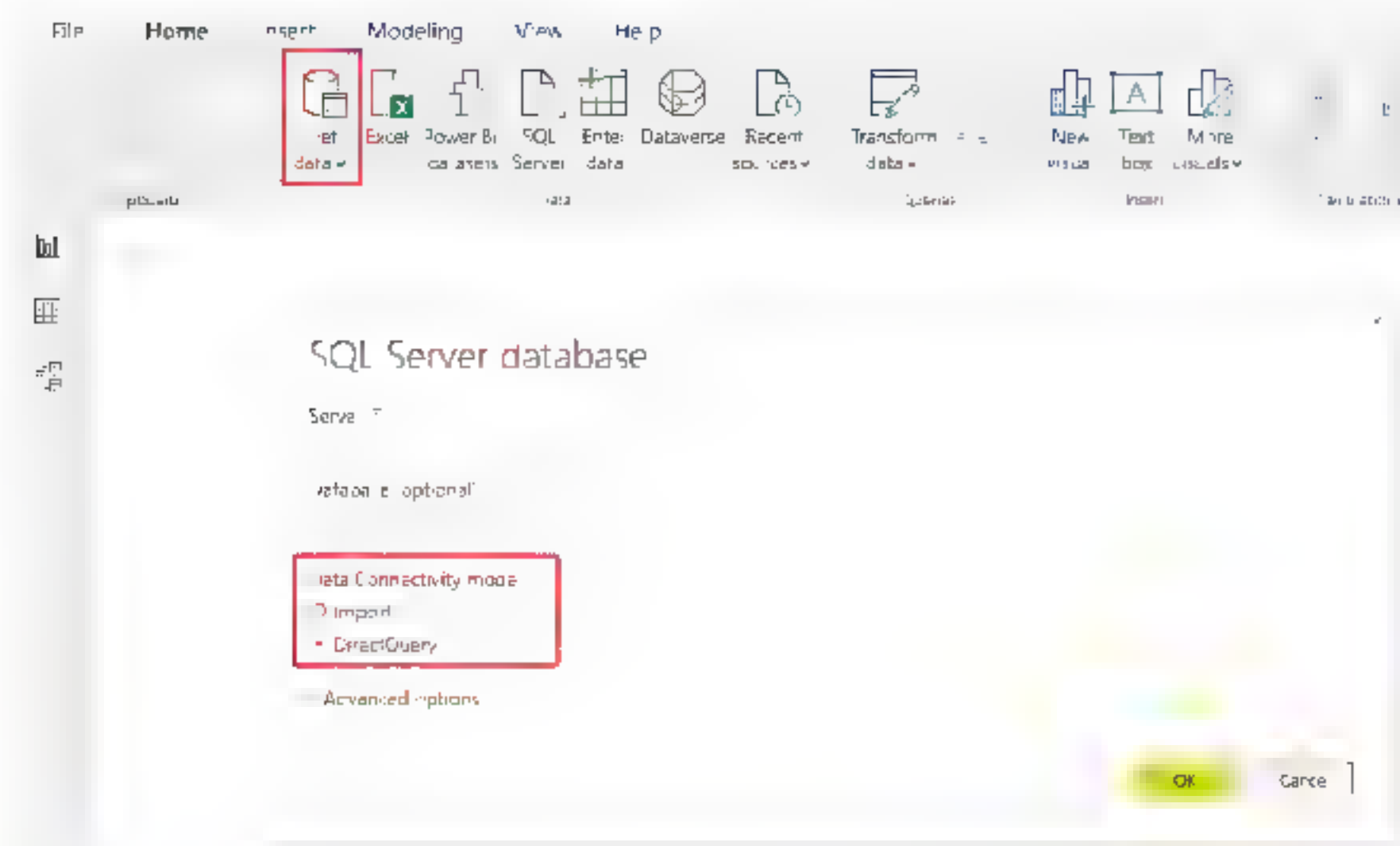
- Choose any of the completed reports from the previous days.
- Apply a custom theme to your dashboard to give it a unique and professional look.
- Experiment with different color schemes, fonts, and styles to match your branding.





## DAY 13

# Learning about Power BI's DirectQuery and Live Connection



## Resources for Learning

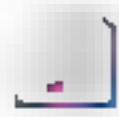
- Microsoft Learn: [Use DirectQuery in Power BI](#)
- Microsoft Learn: [Use a live connection to Power BI data](#)





## Practice Questions

- Connect your dashboard to a data source using DirectQuery or a live connection.



## Project for the Day

- Use any of the completed reports from the previous days.
- Create a connection to a live data source (e.g., a SQL database) and build visualizations that update in real time.
- Test the real-time data interaction by making changes to the source data and observing the impact on your visuals.



# Understanding Power BI's R Integration



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## Practice Questions

- Write a simple R script to perform data analysis or visualization within Power BI.



## Project for the Day

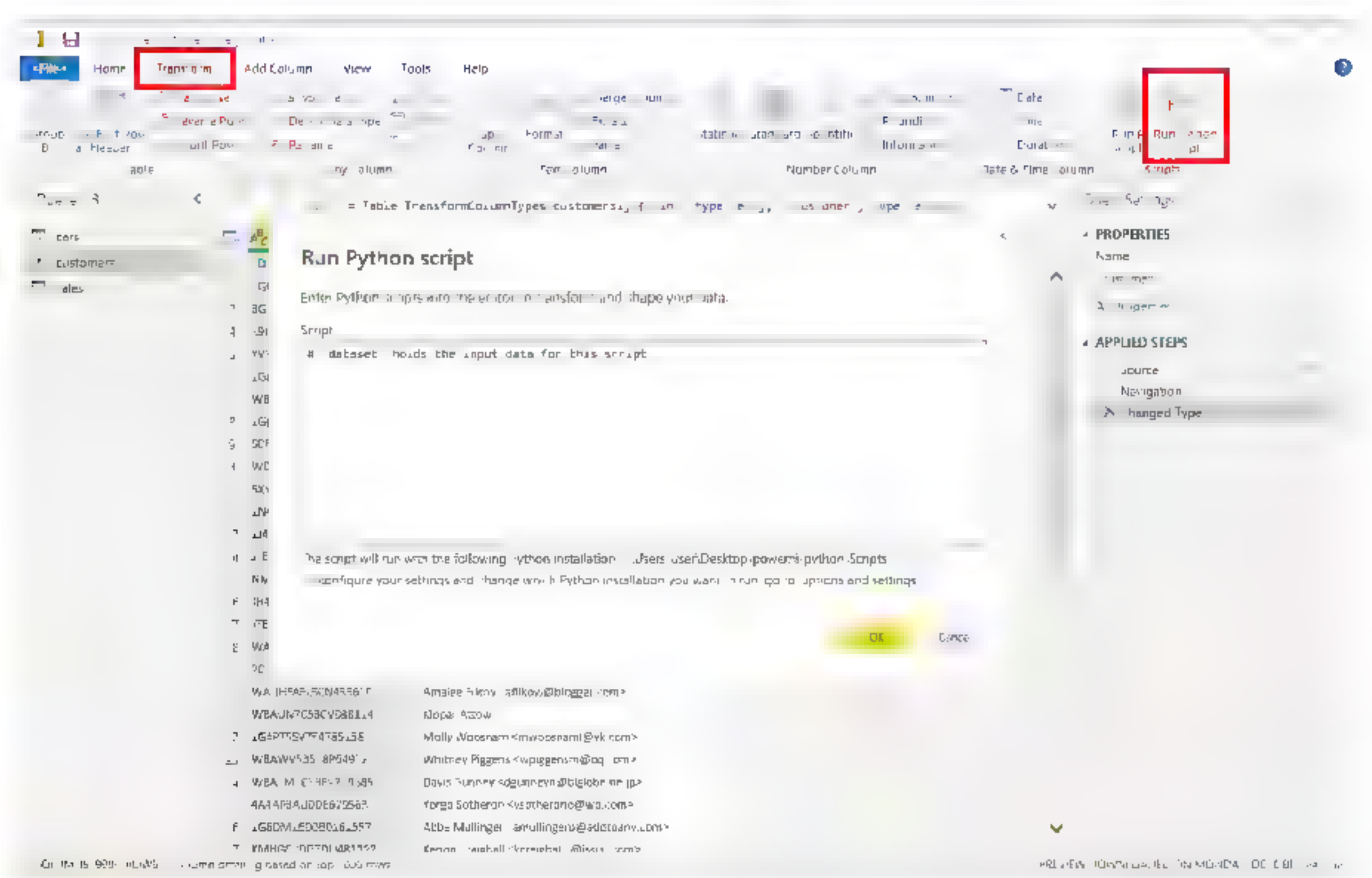
- Use any of the completed reports from the previous days.
- Integrate an R script into your dashboard to perform a specific data analysis task.
- For example, you could use R to create a custom visualization or calculate advanced statistical measures.





# DAY 15

## Learning about Power BI's Python Integration



### Resources for Learning

- Microsoft Learn: [Use Python scripts in Power BI Desktop](#)
- Python Documentation: [Python Tutorial](#)





## Practice Questions

- Write a Python script to perform data analysis or visualization within Power BI.



## Project for the Day

- Use any of the completed reports from the previous days.
- Integrate a Python script into your dashboard to perform a specific data analysis task.
- For example, you could use Python to create interactive visualizations using libraries like Matplotlib or Seaborn.



## DAY 16

# Understanding Power BI's Row-Level Security



## Resources for Learning

- Microsoft Learn: [Implement row-level security in Power BI](#)
- Power BI Blog: [Dynamic Row-Level Security](#)

## Practice Questions

- Implement row-level security for different user roles in your dashboard.



## Project for the Day

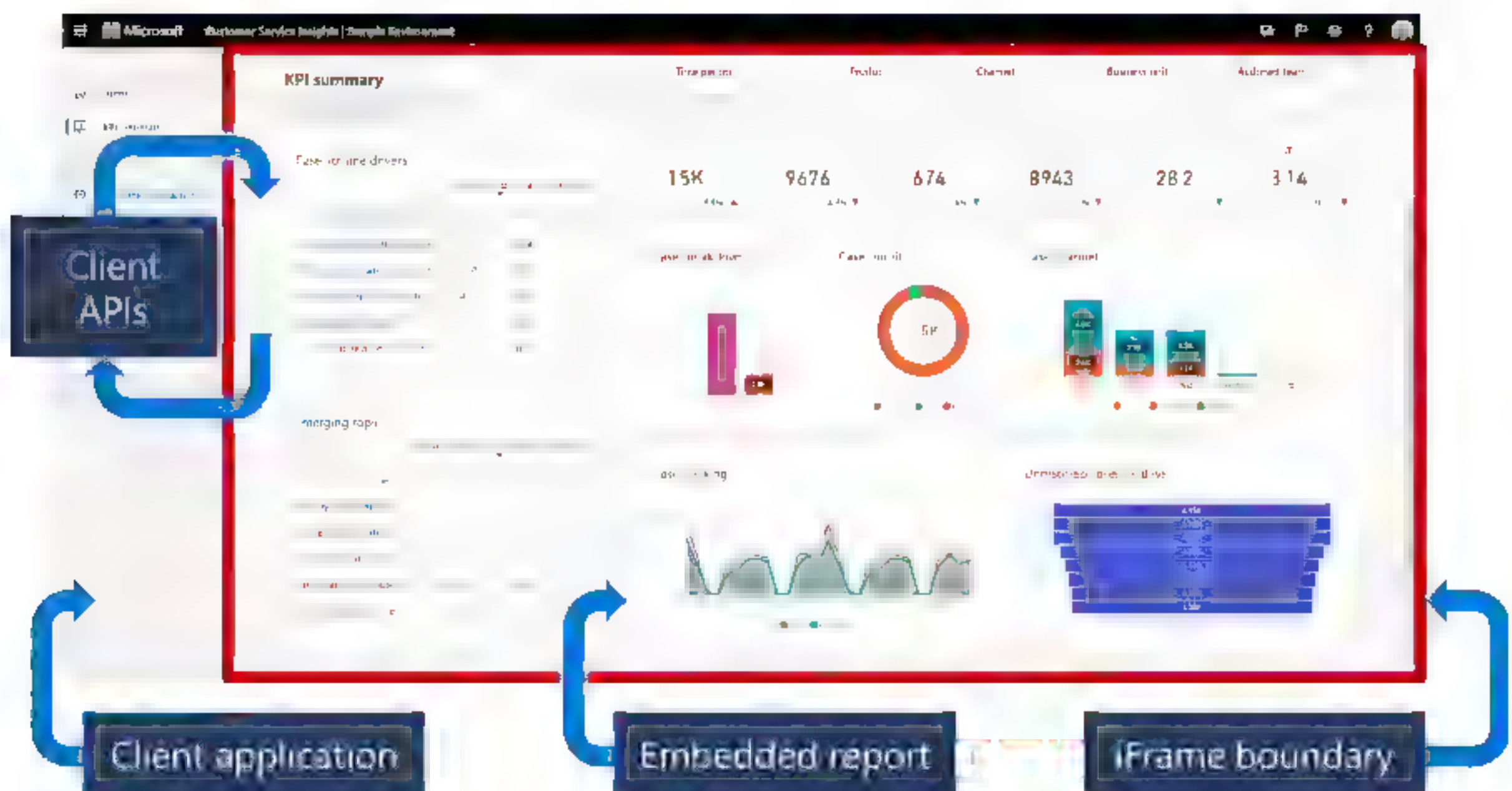
- Choose any of the completed reports from the previous days.
- Implement row-level security in your dashboard to restrict data access based on user roles.
- Create multiple user roles (e.g., manager, employee) and define the data they should be able to access.





## DAY 17

# Exploring Power BI's API and Automation



## Resources for Learning

- Microsoft Learn: [Automate Power BI REST API](#)
- Power BI REST API documentation: [Power BI REST API](#)





## Practice Questions

- Use Power BI API to automate a task, such as publishing a report or refreshing data.



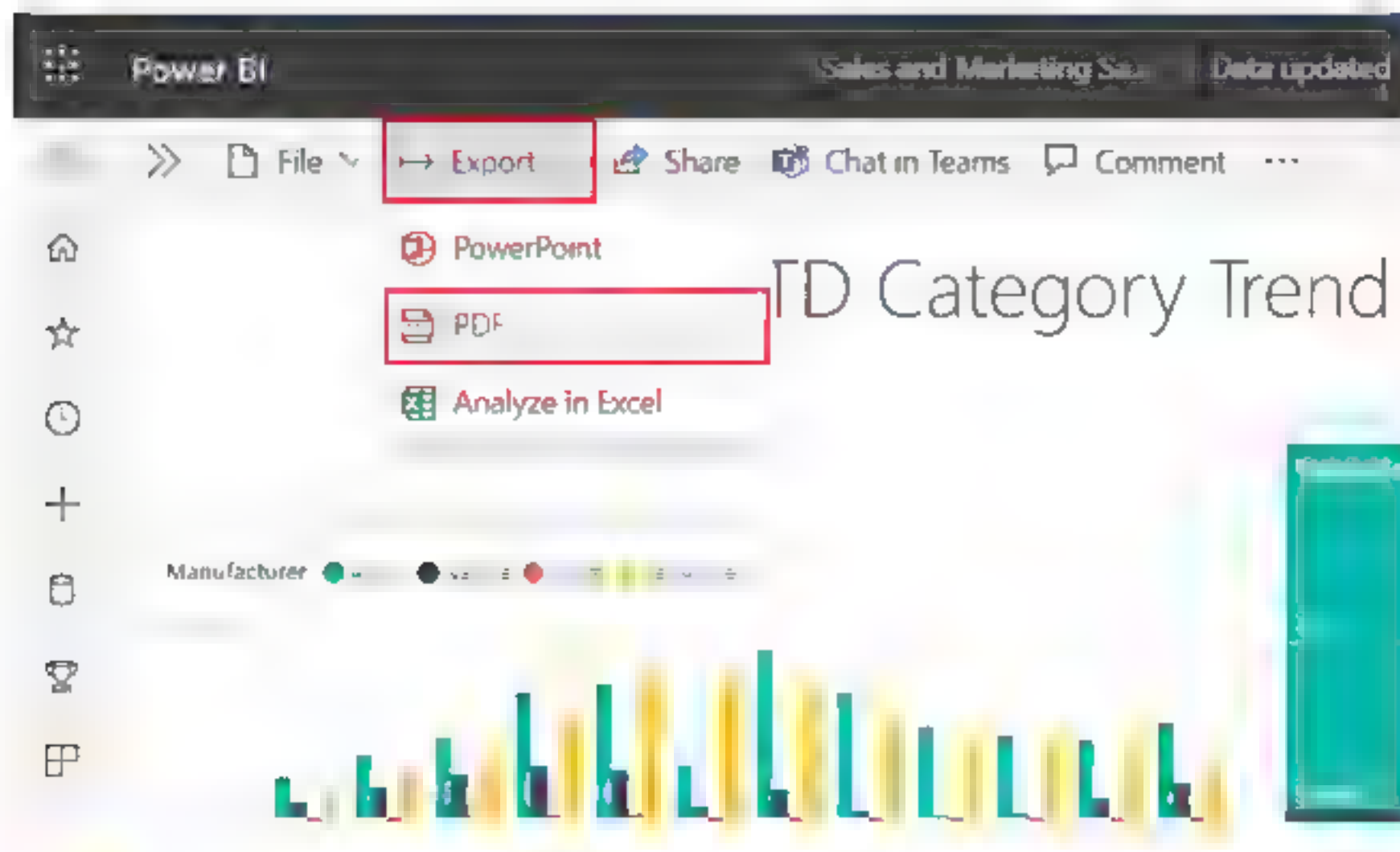
## Project for the Day

- Use any of the completed reports from the previous days.
- Explore Power BI's API and create a simple script to automate a specific task related to report management.
- For example, you could write a script to schedule a report refresh using the API.



## DAY 18

# Learning about Power BI's Paginated Reports



## Resources for Learning

- Microsoft Learn: [Create paginated reports in Power BI](#)
- Power BI Blog: [Introduction to Paginated Reports](#)



## Practice Questions

- Design a paginated report layout and export it to PDF or another format.





## Project for the Day

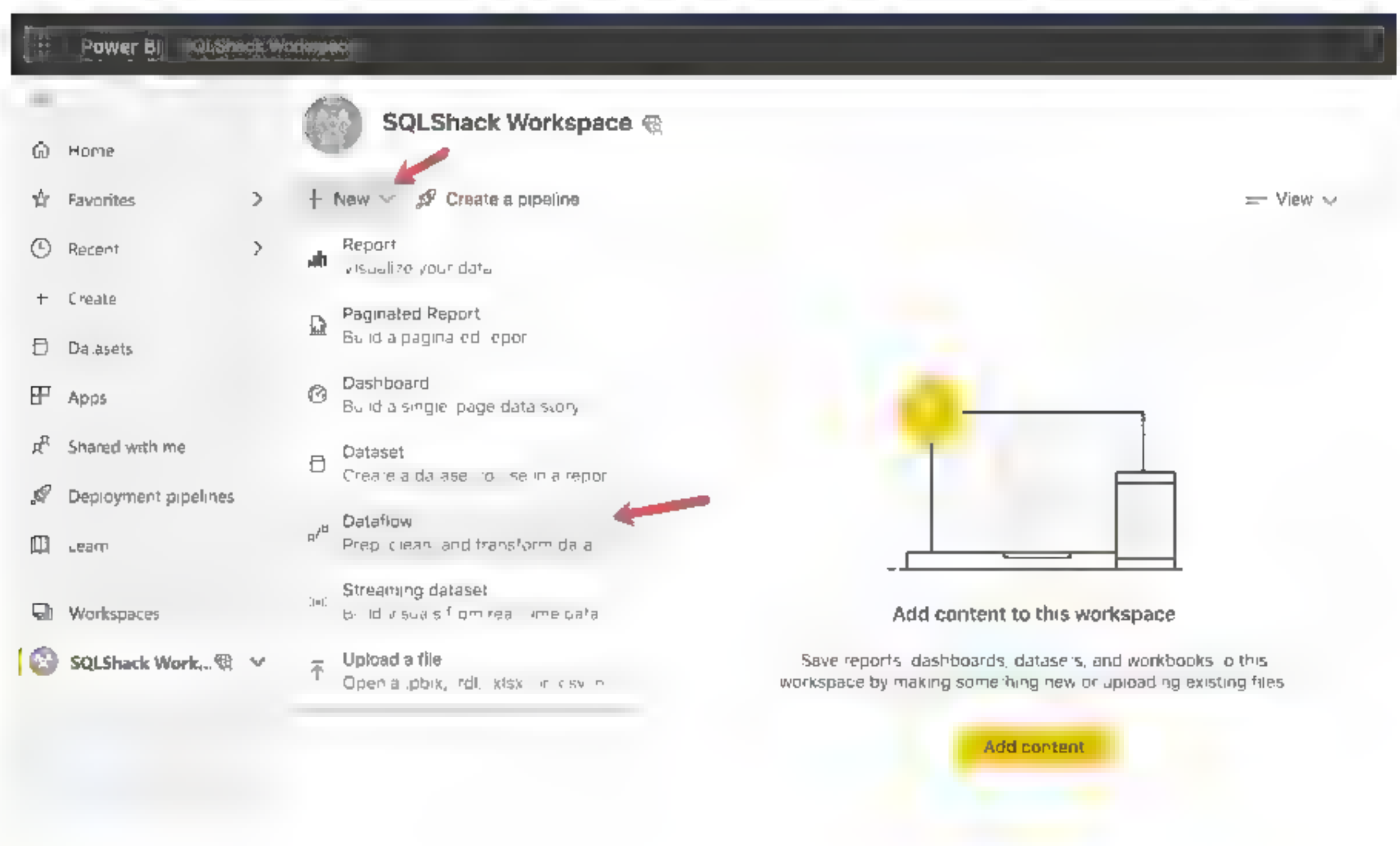
- Use any of the completed reports from the previous days.
- Create a paginated report that presents your data in a traditional, printable format.
- Add elements like tables, matrices, and charts to convey information effectively.





# DAY 19

## Learning about Power BI's Dataflows



### Resources for Learning

- Microsoft Learn: [Introduction to Power BI dataflows](#)
- Power BI Blog: [Introduction to Dataflows](#)





## Practice Questions

- Create a dataflow to extract, transform, and load data.



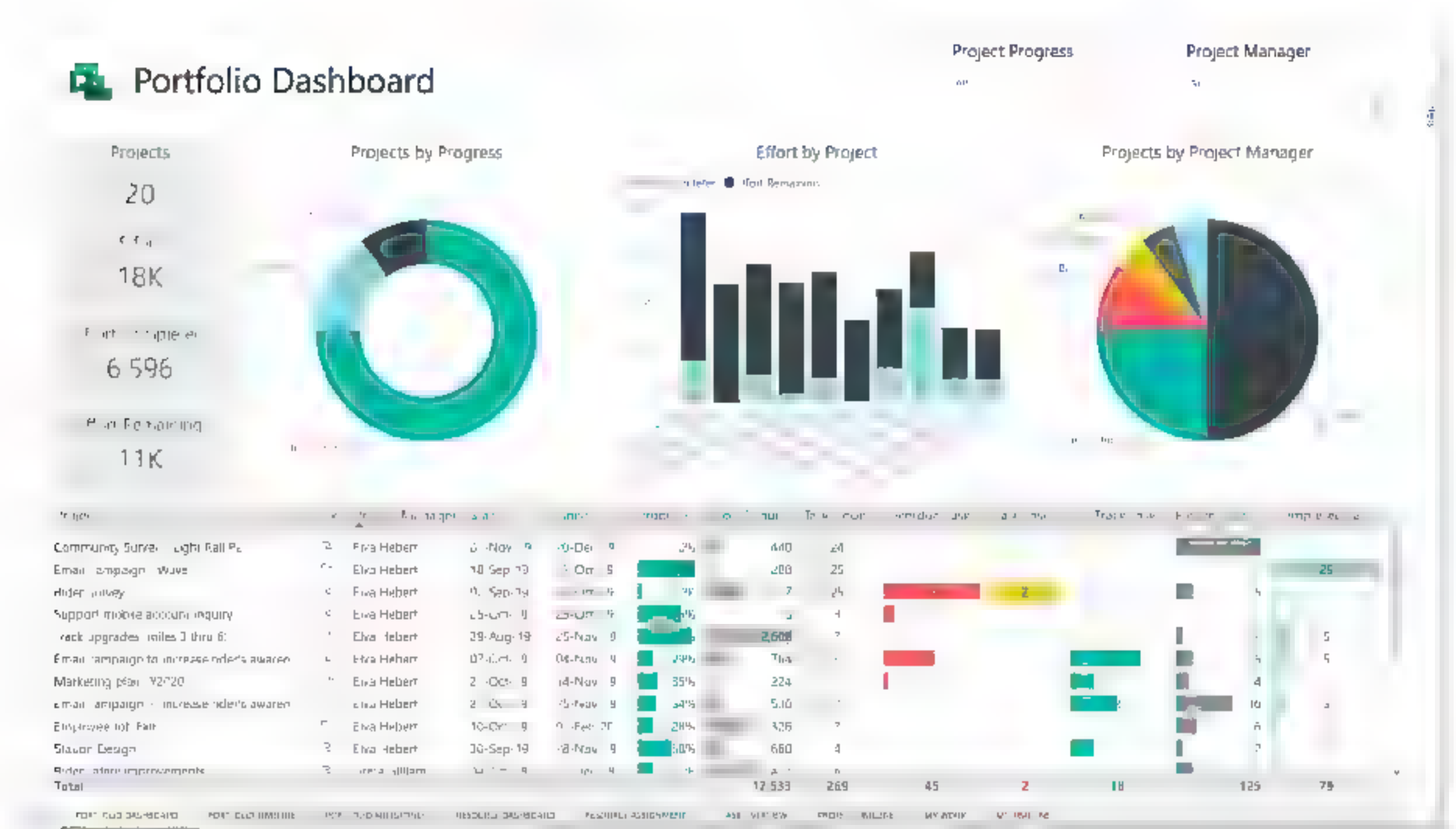
## Project for the Day

- Choose any of the completed reports from the previous days.
- Build a dataflow to extract data from a source, apply transformations, and load it into Power BI.
- Use the dataflow as a source for your report and explore the benefits of using dataflows.



## DAY 20

# Developing a Comprehensive Power BI Project



## Resources for Learning

- Microsoft Learn: [Common Business Scenarios for Power BI](#)
- Power BI Showcase: [Power BI Showcase](#)





## Practice Questions

- Review and summarize the skills you've acquired throughout the previous days.
- Design a comprehensive Power BI project that showcases your abilities.



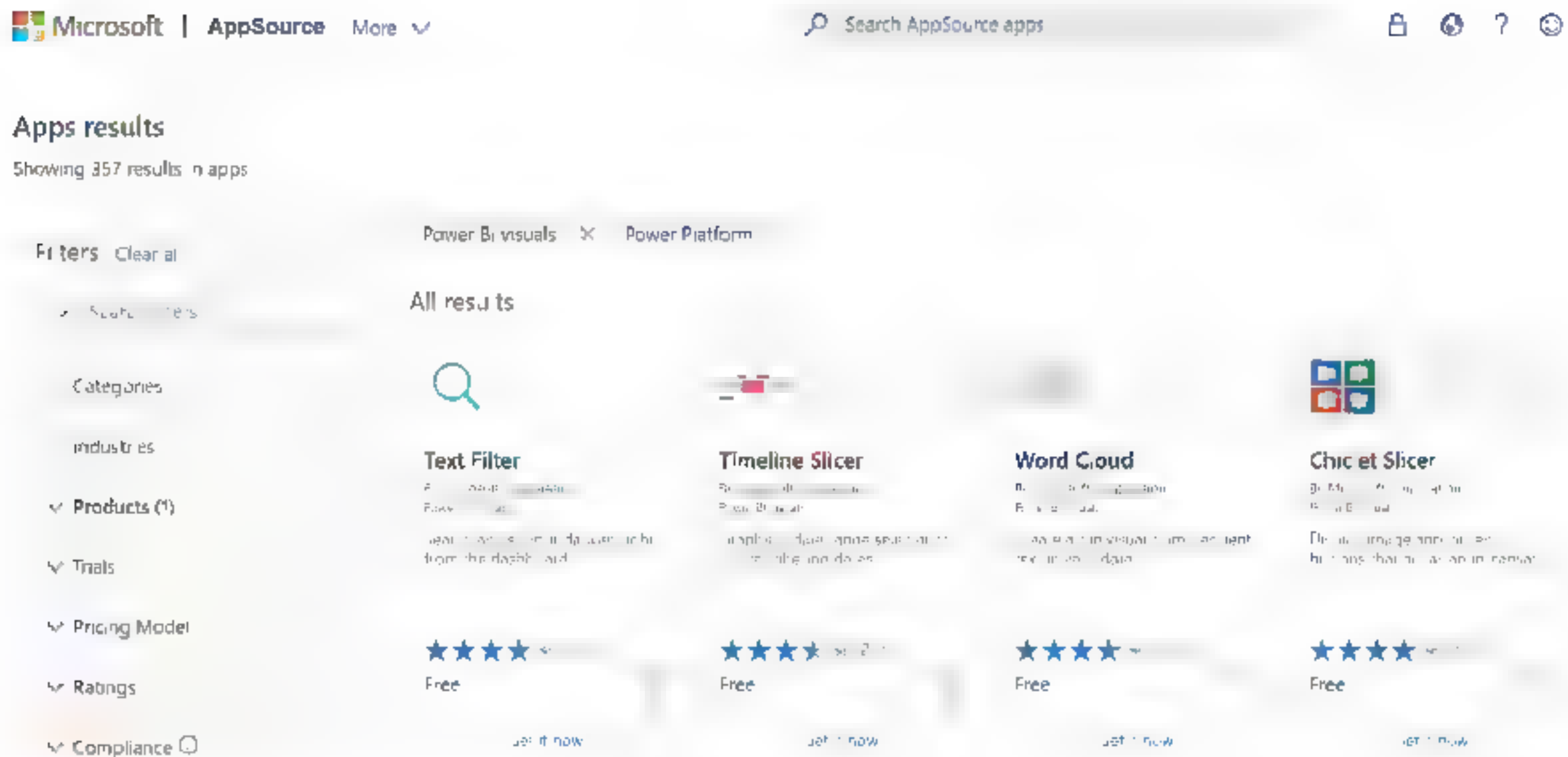
## Project for the Day

- Combine your knowledge from the previous projects to create a comprehensive Power BI report.
- Select a relevant business scenario (e.g., sales analysis, financial reporting) and design a complete dashboard.
- Clean, transform, and model the data to support your chosen scenario.



# DAY 21

## Advanced Visualization Techniques



### Resources for Learning

- Microsoft Learn: [Advanced visualization techniques](#)
- Power BI Blog: [Custom Visuals Gallery](#)







## Practice Questions

- Experiment with custom visuals from the Power BI marketplace.
- Use advanced visualization techniques like drill-through actions, custom tooltips, etc.



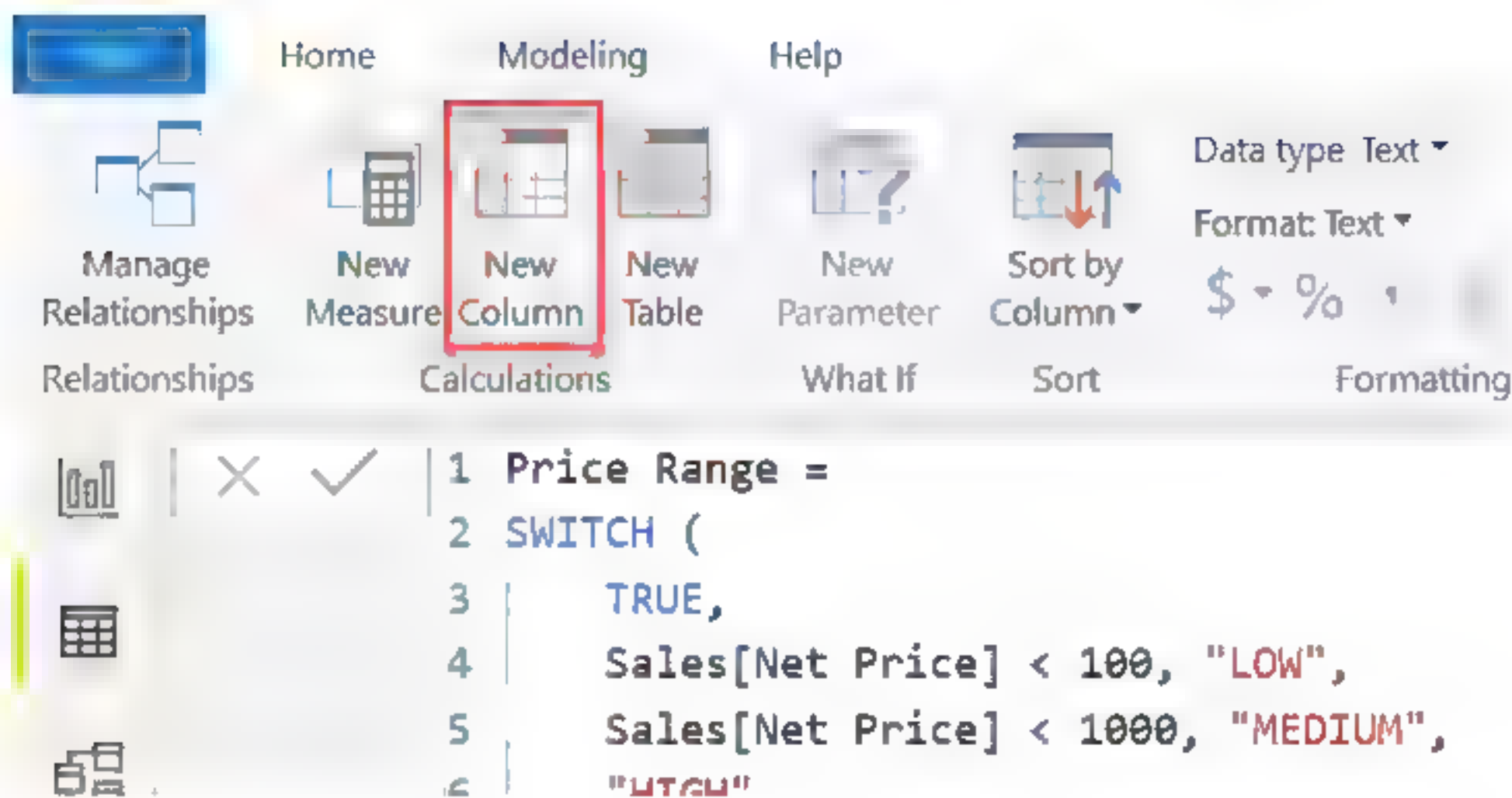
## Project for the Day

- Choose any of the completed reports from the previous days.
- Enhance your report with advanced visualizations, such as custom visuals, drill-through actions, and slicers.
- Explore the Power BI marketplace to find and incorporate custom visuals that suit your project.



## DAY 22

# Advanced Data Analysis with DAX



## Resources for Learning

- Microsoft Learn: [Advanced data analysis with DAX](#)
- Power BI Community Blog: [Advanced DAX Techniques](#)





## Practice Questions

- Write complex DAX calculations involving time intelligence, advanced filtering, etc.
- Use functions like CALCULATE, FILTER, and ALL to create advanced measures.



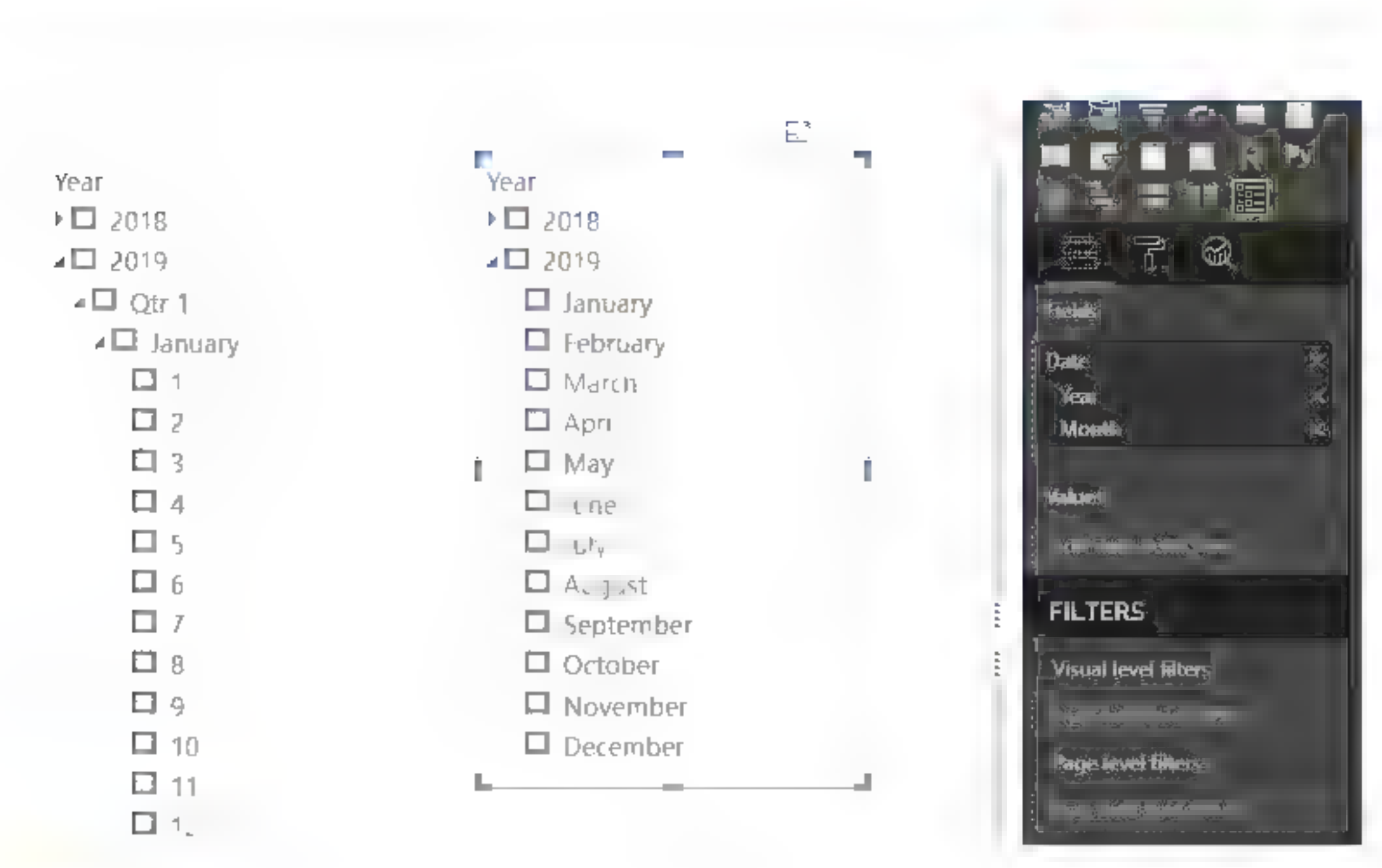
## Project for the Day

- Choose any of the completed reports from the previous days.
- Enhance your report with advanced DAX calculations, such as calculating growth rates, moving averages, etc.
- Implement advanced filtering and time intelligence functions to gain deeper insights.



## DAY 23

# Advanced Data Modeling and Relationships



## Resources for Learning

- Microsoft Learn: [Advanced data modeling in Power BI](#)
- DAX Patterns: [Advanced Data Modeling Patterns](#)





## Practice Questions

- Implement advanced relationships like bidirectional relationships and complex hierarchies.
- Create complex calculated tables using DAX.



## Project for the Day

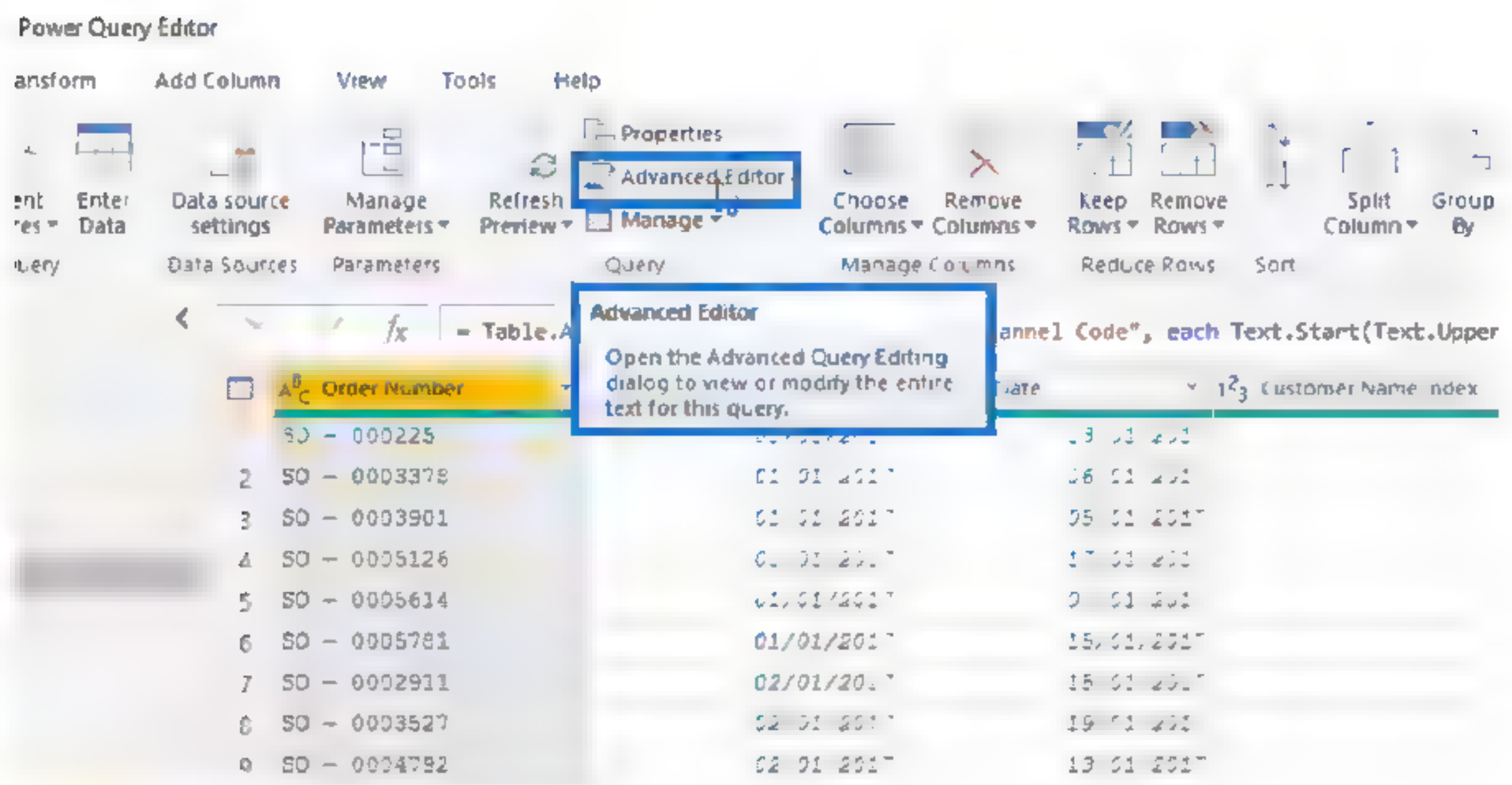
- Choose any of the completed reports from the previous days.
- Implement advanced data modeling techniques, such as bidirectional relationships or complex hierarchies.
- Create calculated tables using DAX to support your project's analytical requirements.





# DAY 24

## Advanced Data Transformation with Power Query



### Resources for Learning

- Microsoft Learn: [Advanced Power Query M formulas](#)
- Power Query M Function Reference: [M Function Reference](#)





## Practice Questions

- Write complex Power Query M formulas to perform advanced data transformations.
- Combine multiple queries using advanced merging techniques.



## Project for the Day

- Choose any of the completed reports from the previous days.
- Apply advanced data transformation techniques using Power Query M.
- Combine multiple queries using advanced merging techniques like merging queries based on multiple columns.



# DAY 25

## Data Visualization Best Practices



### Resources for Learning

- Microsoft Learn: [Data visualization best practices](#)
- Power BI Blog: [Data Visualization Tips](#)





## Practice Questions

- Apply data visualization best practices, such as avoiding chart junk, choosing appropriate chart types, etc.



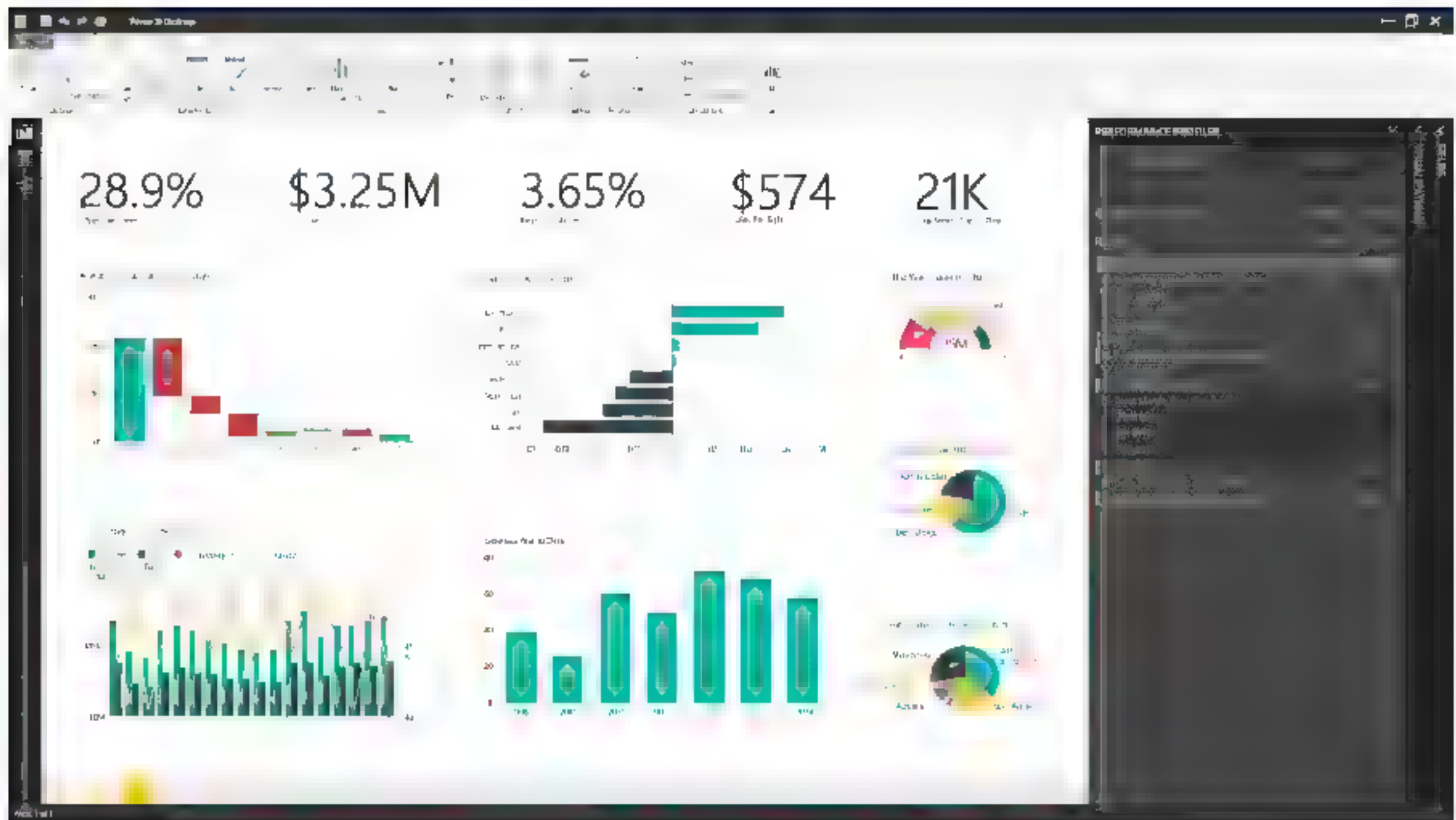
## Project for the Day

- Choose any of the completed reports from the previous days.
- Review and refine your visualizations based on data visualization best practices.
- Ensure that your visualizations effectively convey insights without clutter or confusion.



## DAY 26

# Performance Optimization and Data Refresh



## Resources for Learning

- Microsoft Learn: [Optimize Power BI report performance](#)
- Microsoft Learn: [Optimize data refresh in Power BI](#)







## Practice Questions

- Apply techniques to optimize report performance and minimize data refresh time



## Project for the Day

- Choose any of the completed reports from the previous days.
- Implement performance optimization techniques to ensure your report loads quickly and responds smoothly.
- Explore ways to optimize data refresh schedules and improve efficiency.



# DAY 27

## Creating Dynamic Reports with Power BI



### Resources for Learning

- Microsoft Learn: [Create dynamic reports with Power BI](#)
- YouTube Tutorial: [Creating Dynamic Reports in Power BI](#)

### Practice Questions

- Create dynamic report elements using features like bookmarks, buttons, and drill-through actions.



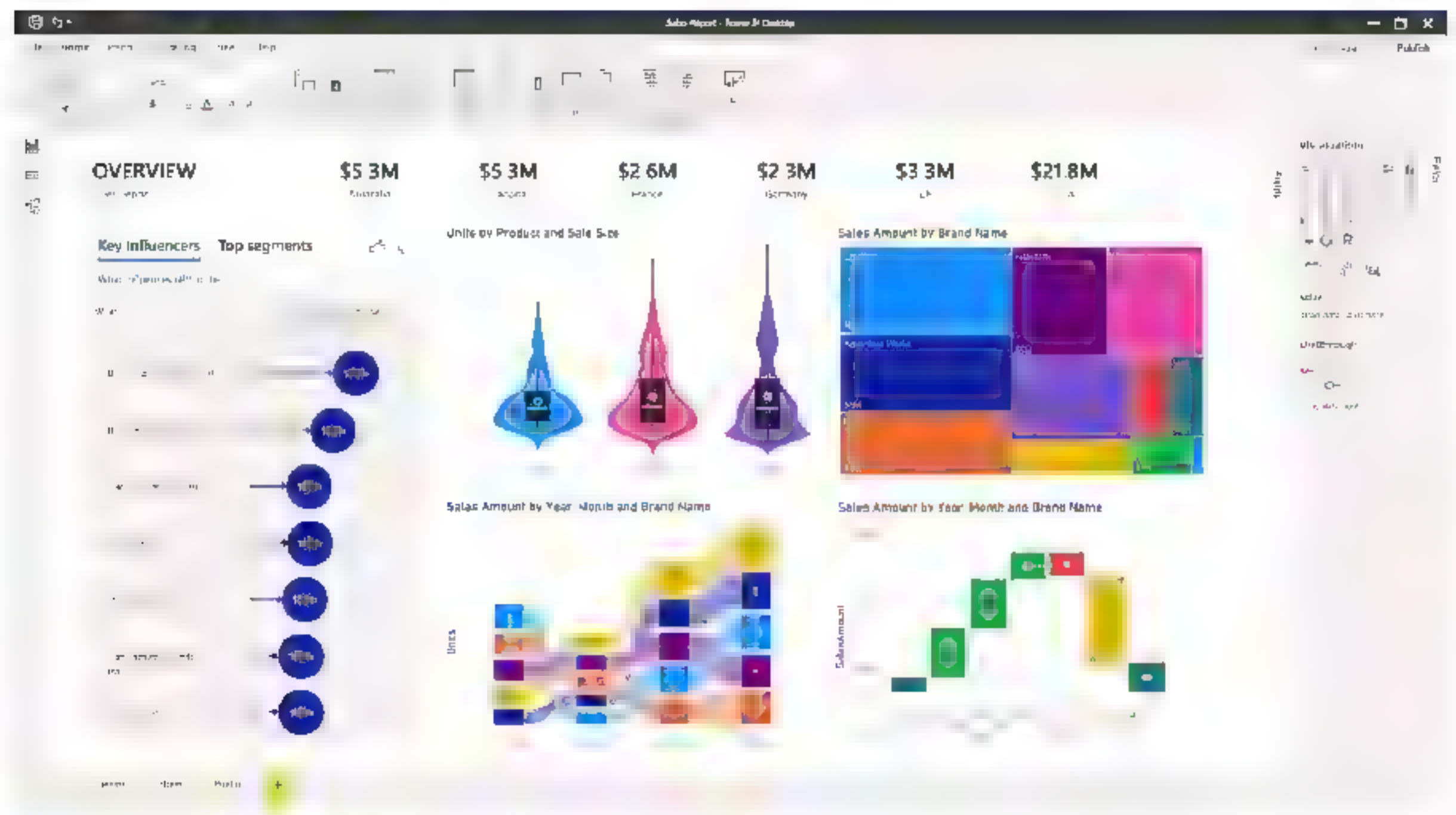
## Project for the Day

- Choose any of the completed reports from the previous days.
- Create a dynamic report experience using bookmarks, buttons, and drill-through actions.
- Allow users to interactively explore the data and focus on specific insights.



# DAY 28

## Advanced Data Analysis with Python



### Resources for Learning

- Microsoft Learn: [Python integration in Power BI](#)
- Python for Data Analysis: [Python for Data Analysis](#)



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## Practice Questions

- Write advanced Python scripts to perform complex data analysis tasks within Power BI.

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## Project for the Day

- Choose any of the completed reports from the previous days.
- Incorporate advanced Python scripts into your report to perform complex data analysis tasks.
- Use libraries like Pandas, NumPy, or SciPy to enhance your analysis.





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## DAY 29

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# Report Distribution and Collaboration



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Send link


IT Spend Analysis Sample

×

Who would you like the link to work for? [Learn more](#)

 People in your organization 

 People with existing access

 Specific people

Settings

☒ Allow recipients to share this report

☐ Allow recipients to build content with the data associated with this report

Apply

Cancel

## Resources for Learning

- Microsoft Learn: [Distribute and collaborate on Power BI reports](#)
- Power BI Blog: [Collaboration Features in Power BI](#)



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## Practice Questions

- Share your report with others and collaborate on a shared dashboard.

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## Project for the Day

- Choose any of the completed reports from the previous days.
- Share your report with a colleague or team member, granting them appropriate access permissions.
- Collaborate on a shared dashboard, gather feedback, and iterate on improvements.

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## DAY 30

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# Final Project Showcase and Review

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### Resources for Learning

- Power BI Community: [Power BI Community](#)
- Udemy: [Power BI Courses](#)

### Practice Questions

- Review and summarize the skills you've developed over the past 30 days.
- Showcase your final Power BI project to peers, mentors, or online communities.

### Project for the Day

- Use any of the completed reports from the previous days.
- Polish and finalize your comprehensive Power BI project.
- Share your project with your network, mentor, or online Power BI community for feedback and recognition.

